Quality Control

Work Order February-14-13 1	· ID 97			*970	142*						Page	1
Revision ID:	03207-7			Accept	*N900	040	100)*	Setup Sta	1 \	IS1*	The second second
	/14/13 /25/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item l Customer:	ID:					IS2*	
Approvals:	Process Pl	an: <u>µし</u> う	Date: \\\ 3-02-			ate:			Run Sta	IZ	IR1* IR2*	
Sequence ID/ Work Center ID		Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
Draw Nbr	Re	vision Nbr										
D3207	С	į										
100		FLOW WATER JET		0.00				6			0AS 05 	/3·03·
Waterjet FLOW CNC Waterjet		Memo 1-Cut as per Dwg Rev:_	Dwg D3207	0.00							0-03	
6061,063		Prog Rev:	C									
*110		QC2- Inspect parts off m	nachine FAI/FAIB	0.00				6			05 05	13.03.
QC ,		Memo		0.00							a-83	

Memo

NCR:	Yes	/ No				WORK ORDER NON-O	COI	NFORM	AANCE / UPI	DATE			
											QA Closed:	Date:	
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIG	CI.					Rework	1		Skid-tube	Crosstube	1	Water Jet	Engineering
Part i	No.					Scrap	1	l .	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	•					Use-as-is	1		noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR I	۷o.	- "				Work Order Update]		Large Fab	Composite		Supplier	
Root					Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling									1				
Operator									I				
Material									l				
Setup									1				
Other													
Process												İ	
Supplier	,												
Training											1		
Unapproved									<u> </u>				<u> </u>
							AUL	LT CATE	GORY				
Landi		1			_	General		1		_	7		٦. ،
ļ	-	Bending				Bend	<u></u>	Grain		<u> </u>	Ovalized	<u> </u>	Pressure/Forced
	_	Centre No	ot Concer	ntric to	0/s	BOM/Route	-	Hardwa		<u> </u>	Over/Under	<u> </u>	Temperature/Cure
	-	Cracks			<u> </u>	Broken/Damaged	\vdash	- i	ion Incomplete		Part Incorre	<u> </u>	Weld
	-	Crushed/	Crimped.		<u> </u>	Burrs	\vdash	-	ions Incomplete/I	Unclear	Part Lost/M	· L.	Wrong Stock Pulled
	\vdash	Cuffs			_	Contamination	\vdash	Mainte		<u></u>	Part Moved		
	-	Heat Trea				Countersink	\vdash	Mislabe		.	Positioned		Tout
	_	Inspection	-	Tube		Cut Too Short	\vdash	Misread	i		Power Loss,	'Surge	Other
	1	Ripples in	Bend		1	Drill Holes		Offset					

Out of Calibration
Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde February-14-13				*970	42*						Page	2
Revision ID:	D3207-7 Packer			Accept	*N900	04010	n*	Setup	Start Stop		S1* S2*	
	2/14/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item II Customer:	D :				IV.		
Approvals:		in:		Tooling: SPC (Y/N):		te:t	_	Run	Start Stop	*NI *NI	R1* R2*	1
Sequence ID/ Work Center II 120 *170* QC Quality Control)	Operation Description QC8- Inspect parts - secondary	ond check	Set Up/ Run Hours 0.00 0.00 3.5 25	Tool ID	Tool # Plan Cod	-	t Rejo Qty		Reject Number	Insp. Stamp	
150 *150* HandFinish Hand Finishing		Chemical Conversion Co	oat per QS1005 4.1	0.00			_6_	· 	H.	, 13°	32	چ ک
170 *170* QC		QC7-Inspect Chemical (Conversion Coat	0.00 23	Ç		6				·	

Quality Control

											DQA:	Dat	e: <u> </u>	-
NCR:	Yes	/ No			•	WORK ORDER NON-C	O	NFORM	MANCE / UP	DATE			•	·
											QA Closed:	Dat	e:	
Work Ord	or:					DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS		
WOIK OIG	_					Rework	1		Skid-tube	Crosstube	7	Water Jet	Engineering	7
Part f	No.					Scrap	1	1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality	1
	-					Use-as-is			noforming	Finishing	Rec/Stor	re/Packaging	Other	1
NCR I	No.					Work Order Update			Large Fab	Composite		Supplier]
												· · · · · · · · · · · · · · · · · · ·		
Root						ption of work order update	1	nitial	· ·	tion	Sign &	_		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	a QC Inspector	
Doc/Data	Ш													
Equip/Tooling														
Operator	Ц						İ							
Material	Ш													
Setup	Ш													
Other														
Process	Ш													
Supplier	Ш													
Training	Ш													
Unapproved			L	ļ			<u> </u>					L		
						·	AUL	T CATE	GORY					
Landi					Γ-	General Bend	_	Grain		_	Ovalized	ſ	Pressure/Forced	
	-	Bending Centre No	at Cansai	ntric to		BOM/Route	\vdash	Hardwa	ro	<u> </u>	Over/Under	tolerance	Temperature/Cur	٥
	-	Centre No Cracks	or concer	וונווכ נט	^{0/3} -	Broken/Damaged	-	4	ion Incomplete		Part Incorre	,	Weld	_
	-	Cracks Crushed/(Crimpod		-	Burrs	\vdash	1 '	ions Incomplete	/Unclear	Part Lost/M		Wrong Stock Pulle	ed
	-	Crusheu/ Cuffs	сттрей.		-	Contamination	-	Mainte	·		Part Moved	-		
	\vdash	Heat Trea	ıt		—	Countersink	\vdash	Mislabe		<u> </u>	Positioned \			
	\vdash	Inspection		Tube	-	Cut Too Short	-	Misread		<u> </u>	Power Loss/		Other	
	\vdash	Ripples in	•			Drill Holes		Offset				·		
	-	Torque W		Extrusio	n	Drawing		4	Calibration					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde				*970	142*							Page 3
Item ID: Revision ID: Item Name:	D3207-7 Packer			Accept	*N900	040	100)* s	Setup	Start Stop	ı Vi .	S1* S2*
Start Date: Required Date: Reference:	2/14/13 2/25/13	Start Qty: 6.00 Req'd Qty: 6.00	*6* *6*		Cust Item I Customer:	D:						
Approvals:	Process Pl	lan:	Date:	Tooling:	Da	nte:		F	Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):		ite:				Stop	*N	R2*
Sequence ID/ Work Center II)	Operation Description	ock Location:57202	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
180 Packaging		Memo	<u> </u>	0.00				<u>lo</u>				13-03-47
Packaging											-11	~ 10.
190		QC21- Final Inspection	Work Order Release	0.00						<i>]</i> /.	3/3/2	28 M
1QN QC Quality Control		Memo		0.00								

MF 13-3-28

NCR:	es / No				WORK ORDER NON-	COI	NFORN	MANCE / UPDATE		·		•
		~ .						2000		QA Closed:	Date	
Work Orde	or:				DISPOSITION			AG	AINST DE	PARTMENT	/PROCESS	
Part N					Rework Scrap Use-as-is		P	Machining Sma	stube all Fab ishing	4	Water Jet d. Eng. Coor.	Engineering Quality Other
NCR N	No				Work Order Update]	ł .	~ 	posite		Supplier	
Root		T .		Descri	ption of work order update		Initial	Action		Sign &		
Cause	Date	Step	Qty		or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data								,				
Equip/Tooling												
Operator		;										
Material												
Setup												
Other												
Process												
Supplier												
Training		1										
Unapproved		•		<u> </u>		<u> </u>						
						AUI	T CATE	GORY				
Landi	ng Gear			_	General	Γ	٦		Γ	7	г	¬
	Bending				Bend	_	Grain		-	Ovalized	-	Pressure/Forced
		ot Conce	ntric to	o/s	BOM/Route	-	Hardwa			Over/Under		Temperature/Cure
	Cracks				Broken/Damaged	\vdash	- 1 `	on Incomplete		Part Incorred	<u>-</u>	Weld
		/Crimped			Burrs	-	4	ions Incomplete/Unclear	<u> </u>	Part Lost/Mi	issing [Wrong Stock Pulled
	Cuffs			<u> </u>	Contamination	-	Mainte		-	Part Moved	•	
	Heat Tre			<u> </u>	Countersink	-	Mislabe		-	Positioned V		Total and
		on Strip in	lube	<u> </u>	Cut Too Short	-	Misread	i	L	Power Loss/	ourge [Other
	Ripples i			<u> </u>	Drill Holes	\vdash	Offset	. 10				
	Torque V	Vaves in E	Extrusio	n	Drawing	1	[Out of C	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish Folio

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Picklist Print

February-14-13 10:48:11 AM

Page 1

Work Order ID:

97042

Parent Item:

D3207-7

Parent Item Name:

Packer

Start Date: 2/14/13

Required Date: 2/25/13

Start Qty: 6.00

Required Qty: 6.00

Comments:

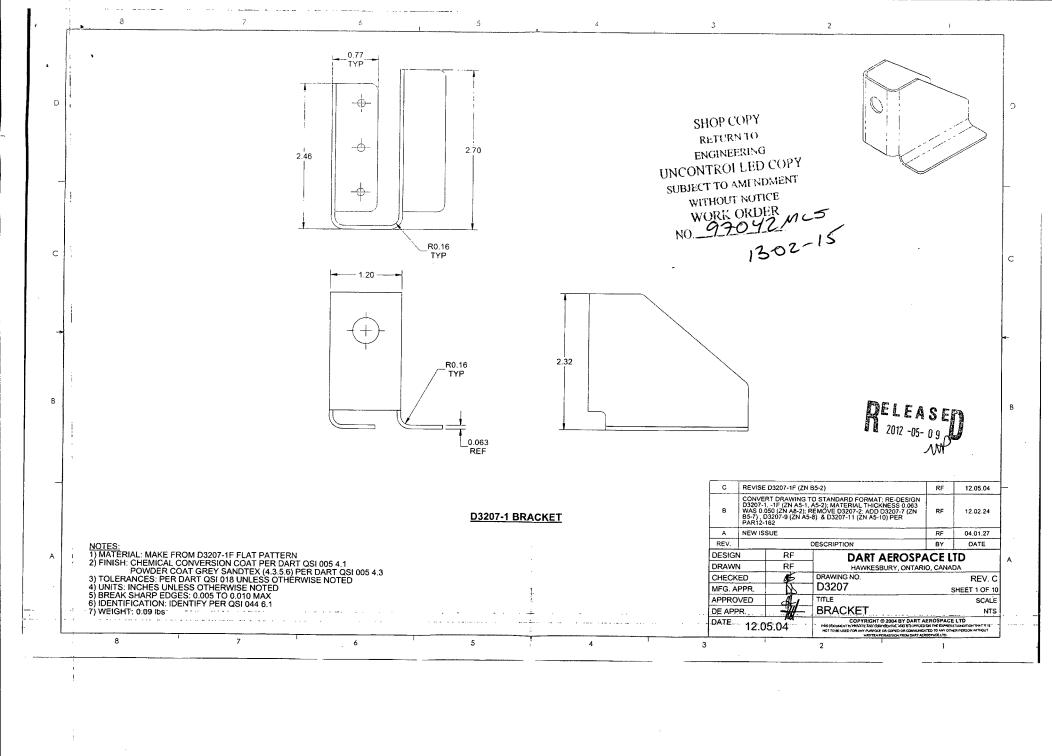
IPP REV A NEW ISSUE 12-03-23 JLM VERIFIED BY:EC

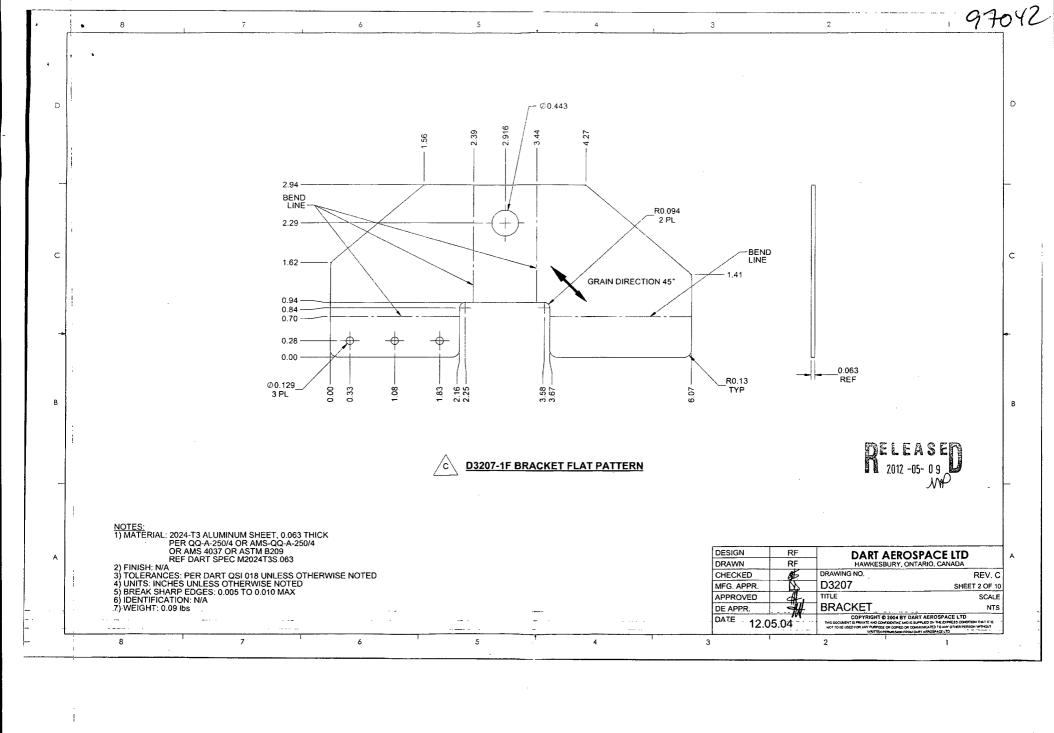
IPP REV:B 12.05.10 per dwg

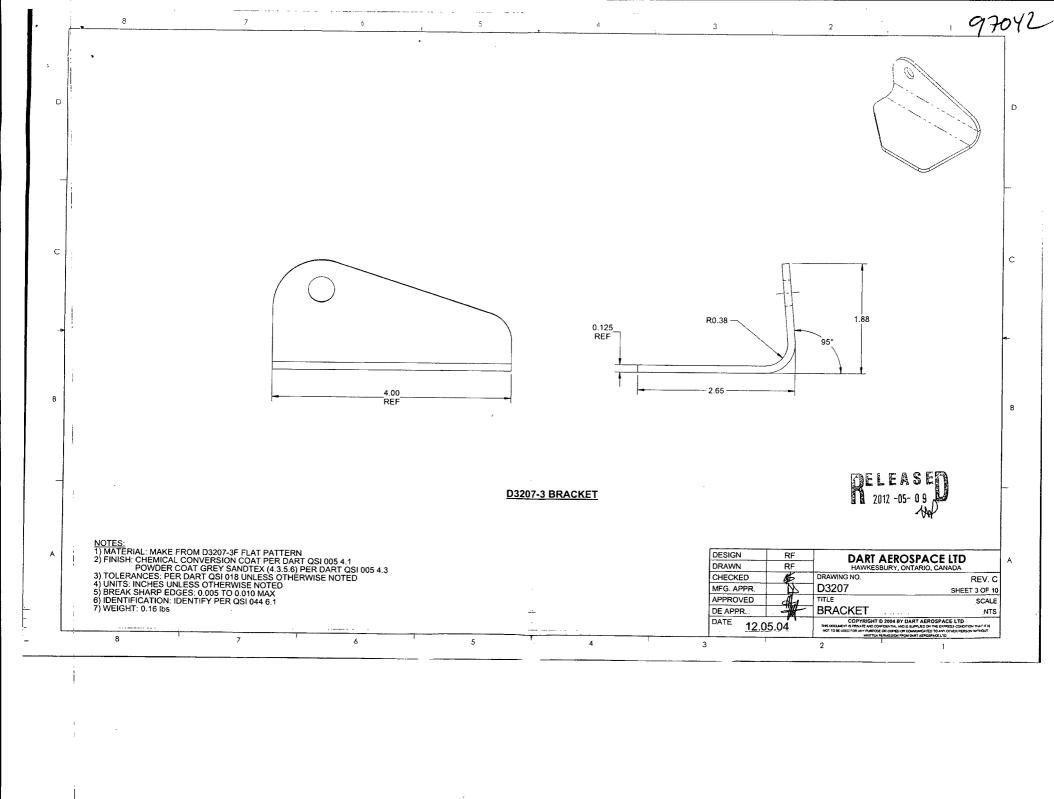
	rev.c DD verf:E0				<u> </u>								
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.063 6061-T6 .063 Sheet		Purchased	No			100	sf	297.6625	0.01	0.0631578		M13.	03 · 25
,				Location		Loc Oty	<u>Lo</u>	c Code					
				MAT021		297.6625							
!				123	135	122.0625							
i				124	003	175.6							

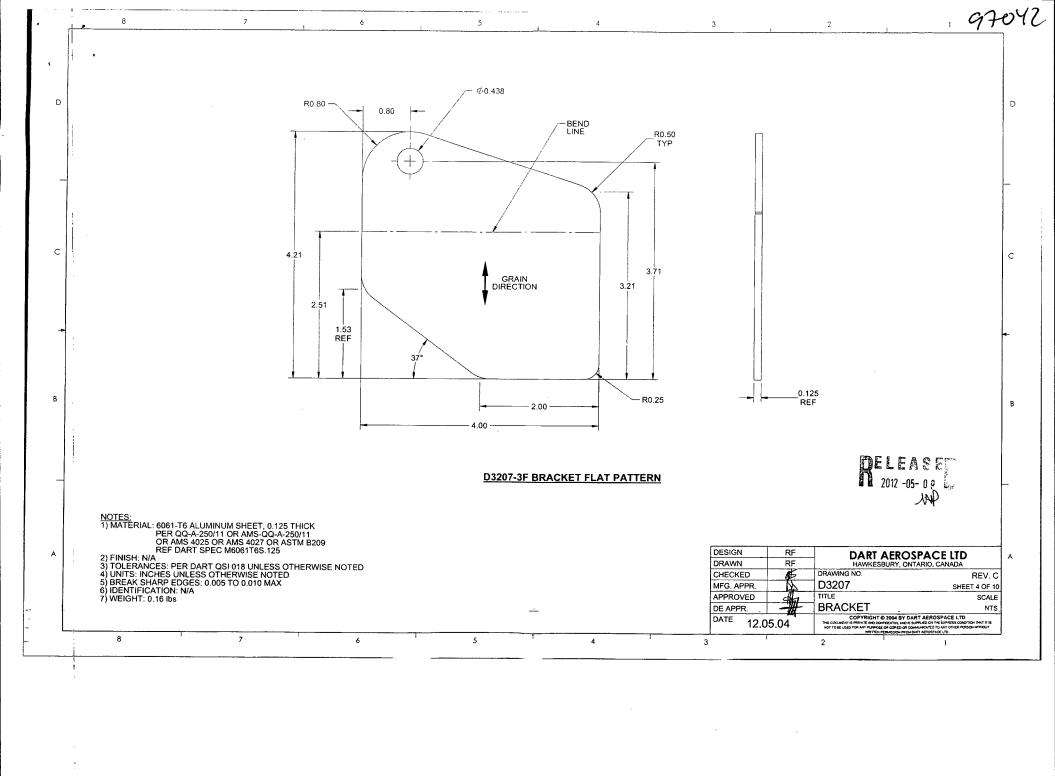
NCR: Y	'es	/ No				WORK ORDER NON-O	CON	NFORM	MANCE / UPI	DATE			
		•									QA Closed:	Date:	
Work Orde	or:		,	· · · · · · · · · · · · · · · · · · ·		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Orde	-					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo.					Scrap		ļ	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
	-					Use-as-is	1 1	Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	lo.					Work Order Update			Large Fab	Composite		Supplier	
													<u> </u>
Root						ption of work order update	1	nitial		tion	Sign &		
Cause		Date	Step	Qty	,	or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling													
Operator													
Material													
Setup			ł	ļ							İ		
Other				l									
Process	Ш		1										
Supplier		i											
Training					ļ								
Unapproved			<u> </u>						<u> </u>			<u> </u>	
						· · · · · · · · · · · · · · · · · · ·	AUL	T CATE	GORY				
Landi	ng G	Sear			_	General	_	7			1	_	7
		Bending			_	Bend	\vdash	Grain			Ovalized	. <u> </u>	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route	<u> </u>	Hardwa			Over/Under	-	Temperature/Cure
		Cracks				Broken/Damaged		4	ion Incomplete		Part Incorre		Weld
•		Crushed/	'Crimped			Burrs	\perp		tions Incomplete/	Unclear	Part Lost/M		Wrong Stock Pulled
		Cuffs				Contamination		Mainte		_	Part Moved		
	L	Heat Tre	at			Countersink		Mislabe	eled		Positioned \		٦
		Inspectio	n Strip ir	1 Tube	_	Cut Too Short	\perp	Misrea	d	L	Power Loss,	/Surge	Other
		Ripples in	n Bend			Drill Holes	L	Offset					
		Torque V	Vaves in	Extrusio	on	Drawing	Ŀ	4	Calibration		<u> </u>		
		Turning S	Sequence	9		Finish		Out of	Sequence				
]		Wave/Tv	vist in Tu	be		Folio	1_	Outside	Dimensions				

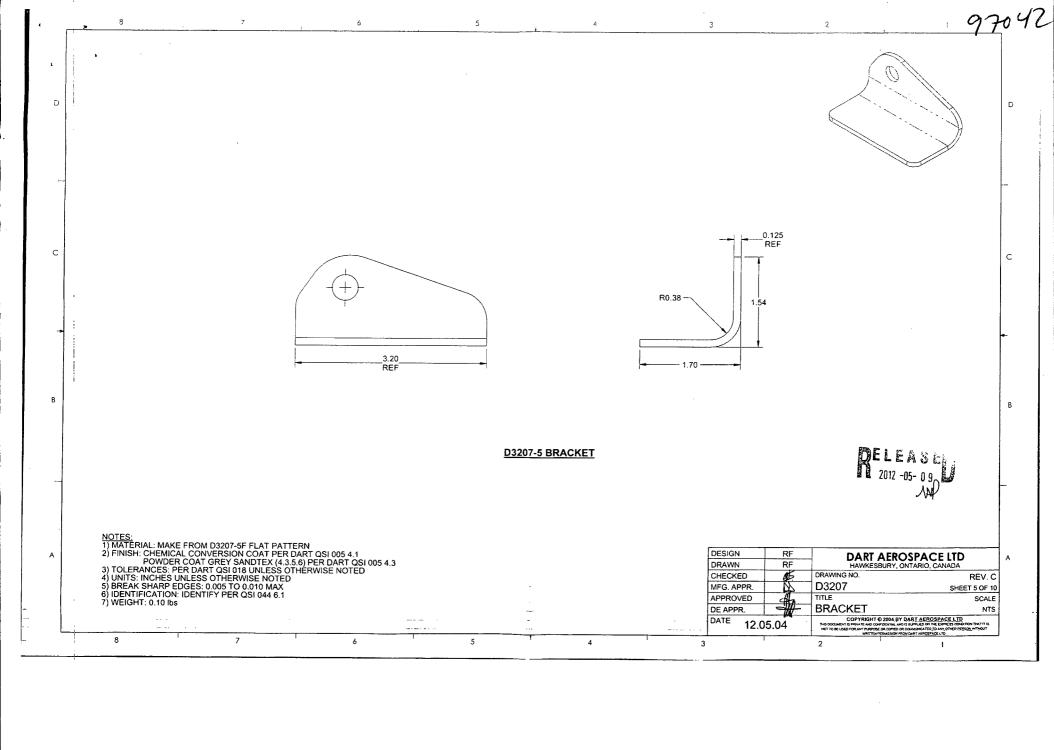
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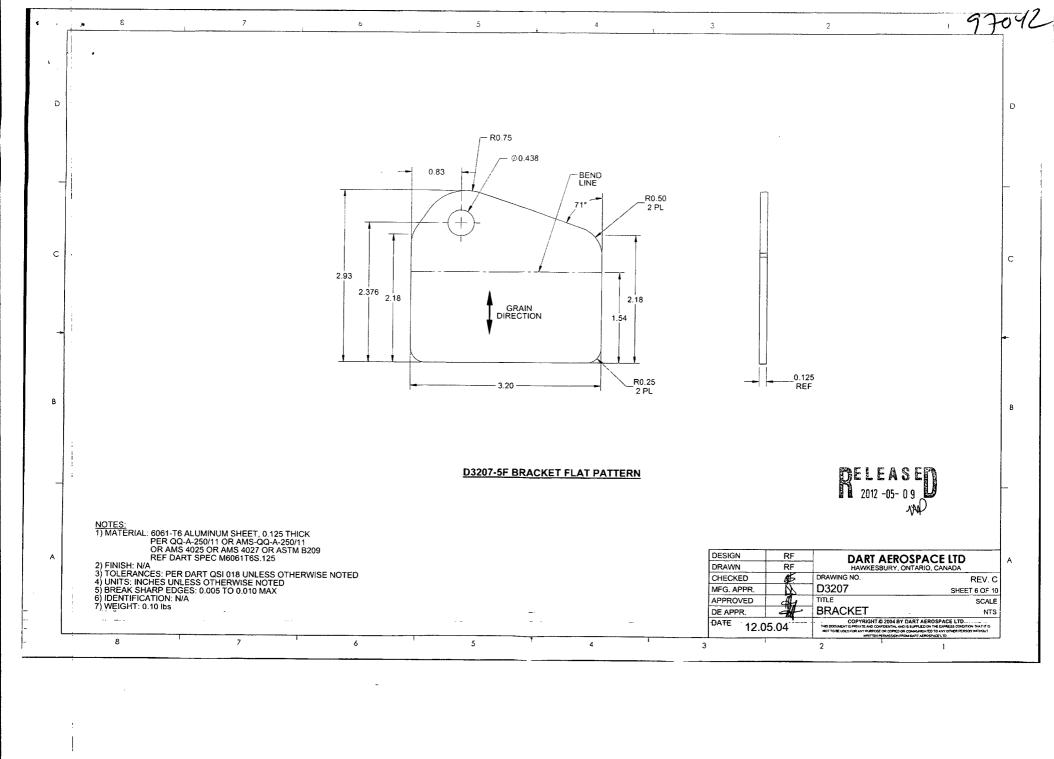


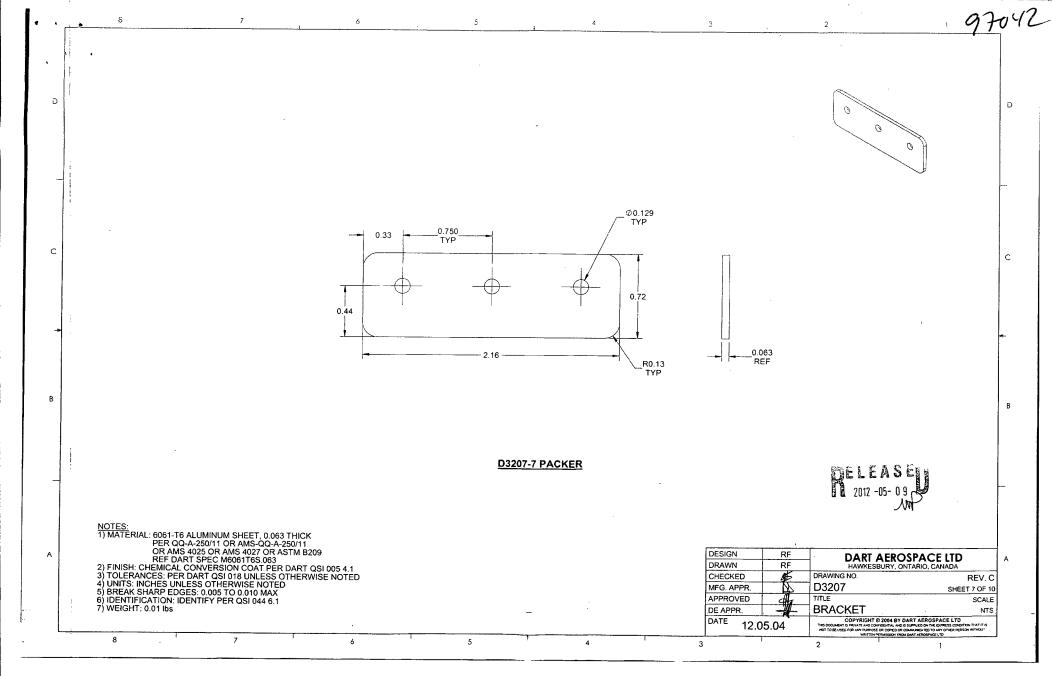


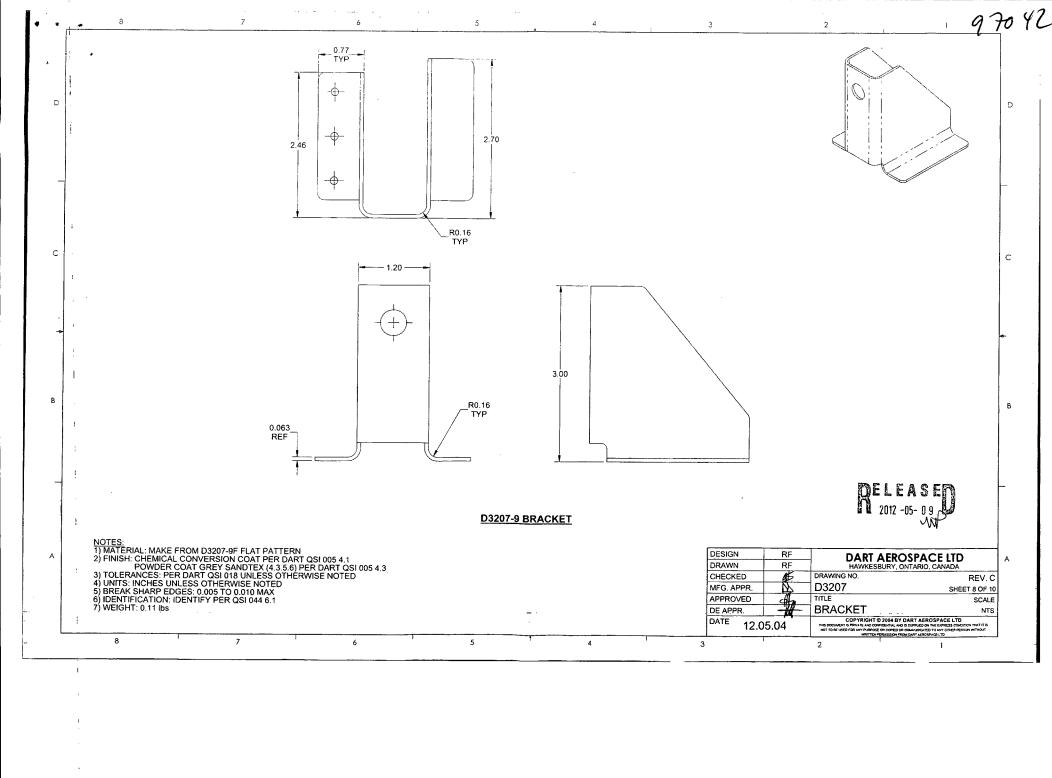


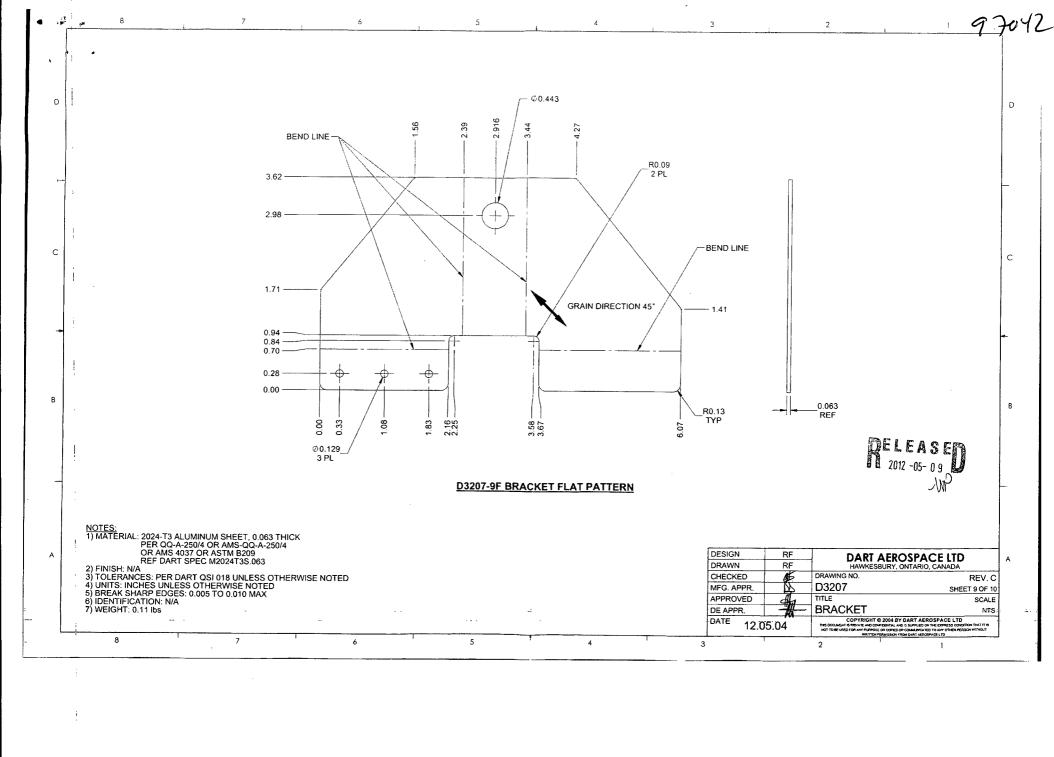


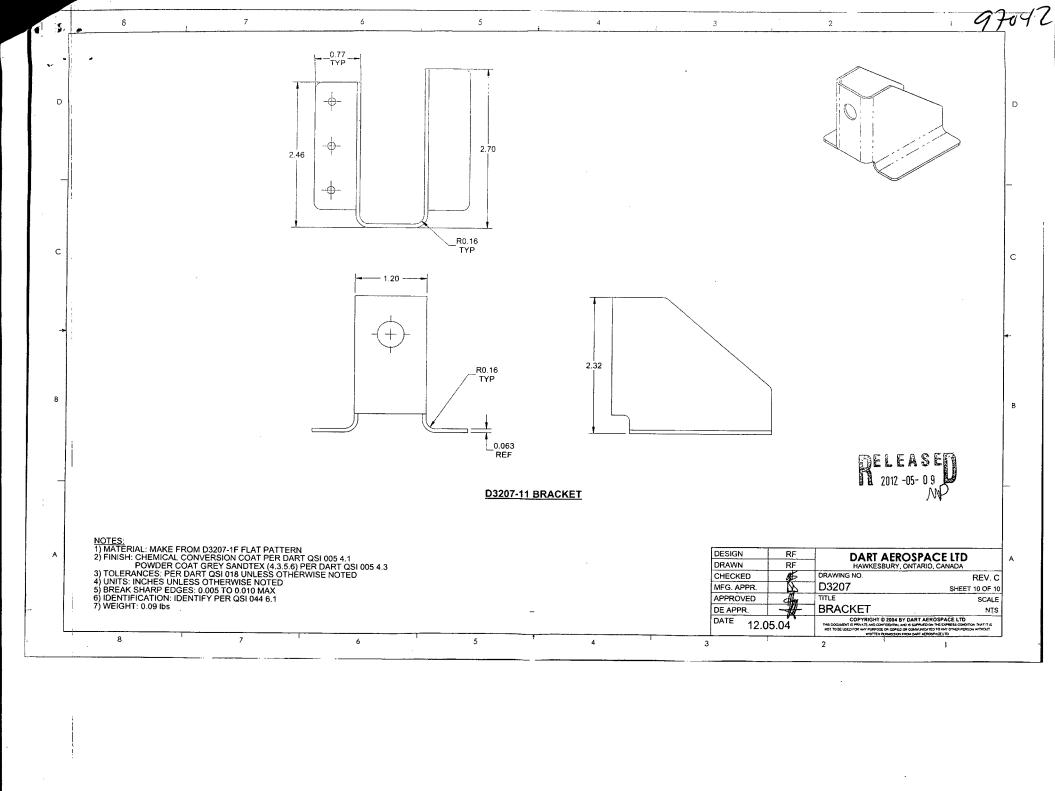












DART AEROSPACE LTD	Work Order:	97042
Description: Packer	Part Number:	D32077
Inspection Dwg: D3207 Rev: C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing	·	Actual		Daire	Method of	Comments
Dimension	Tolerance	Dimension	Accept	Reject	Inspection	Comments
\$0.129	to.005-0.001	0.129	/		V	MM-0)
2.16	+1-0.030	2.16			V	
0.72	+1-0.030	0.718	7		V	
0.44	160.030	0.434	✓		7	
0.750	+1-0.010	0.752	V		7	
0.33	+1-0.030	0.328	V		V	
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-						·
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	,		. ^		
Measured by:	MM	Audited by:	SM	Preliminary Approval:	
Date:	13 03.25	Date:	B. S. S.	Date:	

Rev	Date	Change	Revised by	Approved
Е	10.04.14	Added preliminary approval	KJ	